IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

FINESSE WIRELESS, LLC Plaintiff, v. AT&T MOBILITY, LLC, Defendant.	§ § § § § § § §	CASE NO. 2:21-CV-00316-JRG (LEAD CASE) CASE NO. 2:21-CV-00317-JRG (MEMBER CASE)
FINESSE WIRELESS, LLC, Plaintiff, v. CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS, Defendants, NOKIA OF AMERICA CORPORATION, ERICSSON INC., Intervenors.	§ § § § § § § § § § § § § § §	**JURY TRIAL DEMANDED**

PLAINTIFF FINESSE WIRELESS, LLC'S
REPLY CLAIM CONSTRUCTION BRIEF

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

Finesse replies as follows to Defendants' Responsive Brief ("Resp."):

1. "means for oversampling, at a desired frequency, a passband of received signals to create a bit stream . . ." ('134 patent, claim 2)

The dispute is whether the structure should be limited to Sigma Delta Modulators or Flash A/D converters "that generate low resolution high bit rate digital samples of the passband." Defendants are not shy about their attempt to import this limitation from the specification—one found nowhere in the claim language and that would exclude multiple embodiments.

Defendants' reliance on the lexicography doctrine is misplaced. Defendants assert: "In fact, the specification explicitly defines "Sigma Delta Modulator" as "[a] circuit that generates a low resolution high rate digital sample of a wave form." Resp. at 4. The problem with this argument is that the Court is construing a means-plus-function term, not the term "Sigma Delta Modulator." It is hornbook law that in the second step of construing a means-plus-function claim the Court "determine[s] what structure, if any, disclosed in the specification corresponds to the claimed function," not whether some other term was defined by the patent drafter. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1351 (Fed. Cir. 2015) (citation omitted). Thus, the Court must look to the structures in the specification and construe the term so that it covers all of them.

It is beyond serious dispute that the specification contains examples of structures for this term that are not limited to "generat[ing] low resolution high bit rate digital samples of the passband." Defendants fail to even address several of these embodiments. Defendants ignore the specification's teaching that "[t]he flash A/D cell 320 uses a flash A/D module to sample the receive band to a medium resolution." '134 patent, 15:23-25. Defendants likewise ignore the teaching that "in one embodiment a Flash A/D converter with sufficient resolution can be used, but will require a large dynamic range to accommodate very large jamming signals in the receive pass band and very high sampling speed to prevent aliasing)." *Id.* at 3:10-15.

Finally, Defendants agree that "equivalents thereof" is within the scope of the properly construed term. Resp. at 6. Thus, it should be included for the jury's benefit.

2. "means for computing an estimate of each of the one or more intermodulation products from the source signals that generate the one or more intermodulation products" ('134 patent, claim 2)

The core dispute is whether the structure of this means-plus-function term is merely a "general purpose processor" and thus limited to a specific algorithm. *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). Defendants acknowledge the specification provides structure in the form of "a radio receiver with an intermodulation compensator," rather than a "processor" or "computer" with some algorithm programmed into it. Resp. at 8. Defendants brush this away claiming it is "unhelpful" because they allege it is not "a term of art." But that is not question at hand.[1] The only question is whether the structure of the "means" is a general purpose computer or something else. Here, it is something else—a radio receiver with an intermodulation compensator. The specification confirms this. '134 patent, 7:17-18. The specification also clearly describes the structure of the radio receiver with an intermodulation compensator. *See* Opening Br. at 9-11. Defendants ignore this intrinsic evidence and instead rely on extrinsic evidence in the form of deposition testimony and expert declarations.

Defendants skip the question of *whether* the means is a general purpose processor and jump to explain that the specification describes algorithms. The first question is not whether the specification describes an algorithm, but whether the proper construction should be limited to any described algorithms. Here, it is not. "Because [a radio receiver with an intermodulation compensator] is not a general-purpose computer, it does not trigger the algorithm requirement of *WMS Gaming*." *Qualcomm Inc. v. Intel Corp.*, 6 F.4th 1256, 1267 (Fed. Cir. 2021).

[1] The question of whether a term is a term of art applies only to nonce words in the indefiniteness analysis, and Defendants have made no such claim here.

Finally, Defendants note that Finesse has not proposed an alternative algorithm to include in the construction should the Court construe that the claim requires one. Yet Defendants fail to rebut the substance of Finesse's arguments explaining the multitude of problems with Defendants' proposed algorithm. That Defendants cannot muster an argument in support of their proposed algorithm only confirms that no algorithm should be incorporated into this term.

3. "means for canceling out one or more inband intermodulation products using the estimate of the intermodulation products" ('134 patent, claim 2)

Defendants are incorrect in suggesting that the '134 patent specification names ***only*** an inverter and an adder as performing the "canceling" function. Resp. at 11. In at least one passage describing "cancellation unit 428," the specification also specifically calls out a "summation unit" alongside a "signal adder," meaning that the former is likely not the equivalent of a signal adder: "The output of BPF 410 is sent to cancellation unit 428 (e.g., **signal adder, summation unit, etc.**) where the interference intermodulation product signals are cancelled." '134 patent, 14:62-65 (emphasis added). The inclusion of a "summation unit" in addition to the word "et cetera" additionally signifies that the corresponding structure for "canceling means" cannot be limited to a signal adder, summation unit, and an inverter—the last of which is structure proffered by Defendants but not named in the particular specification example. *See Zircore, LLC v. Straumann Mfg., Inc*., 2016 WL 6093482, at *29 (E.D. Tex. Oct. 18, 2016) (rejecting proposed limitation narrowing "restorations" to certain specific restorations because of patent's "open-ended list of applicable restorations," including 'a single tooth . . . , multiple teeth, a bridge, etc.'"); *Pavilion Techs., Inc. v. Emerson Elec. Co*., 2006 WL 6210180, at *3 (W.D. Tex. Sept. 5, 2006) (rejecting defendant's proposed limiting construction of "input data" to include only "a data value produced by the sampling of a sensor signal from a sensor," because text of the patent "shows that input data

is not limited to data that has been 'sampled,' but also includes data that has been 'produced, derived, calculated, etc.'")

By the same token, the fact that the specification example at 16:42-47 enumerates only an "inverter" to cancel the inband intermodulation products does not preclude that "means for canceling" should be construed to include other structure such as a signal adder, summation unit, phase and amplitude correctors, phase and amplitude adjusters, a source signal intermod generation module, various filters, and all of the additional components within an intermodulation compensator which help perform the "canceling" function. *See* Wells Decl. ¶¶114-120.

Defendants' overly restrictive proposal in "an inverter and an adder" also leaves out the possibility that "combining" two things may be different than "adding" them. For example, the specification states that "cancellation summing cell 343 **inverts and combines** . . . signals with the filtered signal-of-interest to produce a signal-of-interest with the intermodulation interference canceled." '134 patent, 11:58-63 (emphasis added). Even within the context of that passage alone, combining two signals can mean taking the average of the two, which is ***only*** the equivalent of addition if two signals have the same absolute value but one is positive and the other negative. Defendants' proposed construction restricts "canceling" to mean only inverting and adding, to the exclusion of also combining in a way that avoids having to add.

4. "means for performing phase and amplitude adjustment on estimations of the intermodulation product interfering signals in a closed loop manner . . ." ('134 patent, claim 2)

Defendants focus only on the first clause of this phrase, but completely ignore the second (starting with "wherein"). But the "wherein" clause further explains the function to which the "means for performing" term refers.

As to the structure, and as explained above as to the other "means for" terms, it is improper to treat this term as a "black box" general-purpose-processor situation. Indeed, Defendants'

continued focus on a single algorithm at 17:4-51 is unduly narrow. Rather, the patent discloses a full-featured intermodulation compensator that performs the claimed phase and amplitude adjustment in different ways. Although the specification mentions embodiments with processors 220A and 220B, it also discusses, among other things, an intermodulation cancellation cell and the performance of this function using a FIR filter. *See* Wells Decl., ¶¶123-24 (citing '134 patent, at 10:9-23; 11:63-67; and 17:41-51). All these methods fall within the ambit of the "intermodulation compensator" circuitry, making it the proper structure.

5. '134 patent, claim 3 terms: (1) "a sampling unit to sample . . . a passband of received signals to create a bit stream . . ." (2) "a cancellation unit to cancel out isolated interference generated signals using estimations of the intermodulation products generated by the isolated interfering signals . . ." and (3) "a phase and amplitude adjuster to adjust the phase and amplitude of estimations of the isolated interfering signals in a closed loop manner . . ."

Defendants acknowledge, at least in a parenthetical, that they face a presumption against treating these terms of claim 3 under §112, ¶6, because claim 3 does not use "means for" language. Resp. at 16-17 (citing *Williamson*, 792 F.3d 1339). They cannot meet their burden to overcome that presumption as to these terms.

Defendants attempt to invoke the *Williamson* outcome, applying ¶6 to claims that recite function without reciting sufficient structure for performing that function. *Williamson*, however, is a poor analogy for this case. In *Williamson*, the claim term at issue was a "distributed learning control module." *Williamson*, 792 F.3d at 1350. The rest of the claim language simply repeated the goal for the operation of that module: a "distributed learning module *for receiving communications* transmitted between the presenter and the audience member computer systems and *for relaying the communications* to an intended receiving computer system and *for coordinating* the operation of the streaming data module." *Id.* (emphasis added). Because the

Williamson claim provided no guidance as to "how" the module would accomplish these goals, the Court applied ¶6 to it. *Id.* at 1351.

Here, by contrast, claim 3 goes much further. The "sampling unit" claim term does not simply recite a "unit for sampling signals" as in *Williamson*, but rather provides for a sampling unit that samples a "passband of received signals to create a bit stream," doing so at a "desired frequency" and making clear that the received signals are to include "signals of interest and interference generating signals." The same is true for the "cancellation unit" (it cancels out "isolated interference generated signals" in a specific way—by "using estimations of the intermodulation products generated by the isolated interfering signals," with the further explanation that the "estimations of the isolated interfering signals comprise estimations of intermodulation products falling inband of the signals of interest") and "phase and amplitude adjuster" (which adjusts specifically "the phase and amplitude estimations of the isolated interfering signals in a closed loop manner," further explaining that this is done by "making sub-sample phase shifts to make a phase adjustment on the estimations of the isolated interfering signals."). Defendants dismiss the surrounding claim language for these terms as "purely functional," Resp. at 18, but in so doing they ignore the detailed structural limitations contained in the claim; simply maligning the language as "functional" does not make it so.

Here, the surrounding claim language for these terms does not simply recite the purposes of these units/adjusters, but instead supplies sufficient structure to take them out of §112, ¶6. *See Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1366 (2022) ("In cases where it is clear that a claim term itself connotes *some structure* to a person of ordinary skill in the art, 'the presumption that § 112, ¶ 6 does not apply is determinative' in the absence of 'more compelling evidence of the understanding of one of ordinary skill in the art.'") (citations omitted and emphasis added). Courts

in this District, facing similarly detailed claim language, have routinely rejected attempts to apply §112, ¶6 to similar terms that lack "means for" claiming. *E.g.*, *Ultravision Techs., LLC v. Govision LLC*, 2020 WL 12570811, at *36-38 (E.D. Tex. Sept. 30, 2020); *Maxell Ltd. v. Huawei Device USA Inc*., 297 F. Supp. 3d 668, 725-29 (2018); *S3G Tech., LLC v. UniKey Techs., Inc*, 2017 WL 5178837, at *5-15 (E.D. Tex. July 7, 2017); *Secured Structures, LLC v. Alarm Security Grp., LLC*, 2016 WL 7552624, at *5-8 (E.D. Tex. Aug. 9, 2016).

Defendants also have a problem differentiating claim 2 from claim 3. Claim 2 is written in means-plus-function format, but claim 3 is not. Defendants' only response to this is a general citation to *Williamson* about not elevating form over substance. Resp. at 18-19. But "form" matters in this context. If Defendants succeed in transforming the "form" of claim 3 into a means-plus-function claim, then they cannot explain what the difference would then be between claims 2 and 3. Each claim of a patent is presumed to have a different scope, *see Comark Comms., Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998), yet Defendants' treatment of claim 3 would basically turn it into another version of (their reading of) claim 2. The Court should reject Defendants' construction of these terms. *See Jajah Inc. v. Stanacard LLC*, 2010 WL 1838970, at *16 (N.D. Cal. May 3, 2010) ("Claim 14 describes similar functionality, but differs from Claim 15 in that it is written in means-plus-function format. . . . the Court finds that [claim differentiation] weighs in favor of not construing Claim 15 under section 112 ¶ 6.")

6. "oversampling . . . at a low resolution" ('134 patent, claim 20)

Defendants "implicitly" concede their construction is bereft of actual specification support when they argue that the "specification *implicitly* defines [low resolution] as having less than or equal to 4 bits." Resp. at 19 (emphasis added). But the specification never says that. To the contrary, the specification *explicitly* contradicts Defendants, when it characterizes 4-bit sampling as "medium resolution." '134 patent, 11:12-14; 15:23-27. Defendants' argument is not clear as to

those "medium resolution" passages, but it seems as if they wish to suggest that, if 4 bits is medium resolution, then "low resolution" must necessarily be 4 bits or lower. Resp. at 21. But, unless something else is going on, 4 bits cannot be *both* "low resolution" (as Defendants' construction implies) and "medium resolution" (as the specification example demonstrates). And something else is indeed going on. What makes sampling "low resolution" or not is context-specific. For some signals, 4-bits would be a low-resolution sample, whereas for others a larger number of bits would qualify. *See* Wells Decl., ¶82 ("Here, low resolution means 'not high,' where 'high' is the effective number of bits required to fully acquire (obtain) and resolve (decode or extract information from) a signal of interest.").

Although Finesse proposes an alternate construction that emphasizes that oversampling is for the purpose of avoiding aliasing, the best approach here is to accord this term its plain and ordinary meaning, which a skilled artisan could apply in a context-specific situation. *Cf. Bennett Regulator Guards, Inc. v. Atlanta Gas Light Co*., 825 Fed. App'x. 773, 779 (Fed. Cir. 2020) (finding "high pressure" and "low pressure" to be relative terms). The inventor did not attempt to define "low resolution" as always having a specific value in bits, and neither should this Court. Defendants argue that only their construction "places any limits on the otherwise ambiguous term of degree 'low resolution,'" Resp. at 19, but they have not asserted this term is indefinite.

7. "co-located" terms ('775 patent, claims 1, 4, 15–17, 21, 24, 35–37)

The parties do not dispute whether a transmitter or a receiver that is "co-located" is "in the vicinity" of another transmitter or receiver, but only whether it must "not [be] associated with" another transmitter or a receiver. Finesse submits that the definition provided in the "Definitions" section of the '775 patent controls, such that a "co-located receiver" should be construed to mean a "receiver located in the vicinity of the self communications terminal, but not associated with the self terminal." Opening Br. at 24; '775 patent, 6:7-9. Defendants take the further step of replacing

"self terminal" in this context with "a transmitter" (and in other contexts with "a receiver") in contravention of the definition provided in the patent, which makes clear that a "self terminal" encompasses **both** "the receiver and transmitter of the target system." *Contrast* Resp. at 23-24 *with* '775 patent, 5:65-67. Defendants cannot swap out "self terminal" in the "Definitions" section selectively for **either** a "transmitter" or a "receiver."

Defendants' fixation with contrasting "co-located" receivers and transmitters with "companion" receivers and transmitters exposes the misguided underpinnings of their proposed construction. Resp. at 23-24. They reason that because "companion" receivers and transmitters **are** "associated with the companion [transmitter or receiver] of the self communications terminal," then "co-located" receivers and transmitters **must not** be so associated. *Id.*; *see also* '775 patent, 6:1-12. But the patent does not contrast between "companion" receivers/transmitters and "co-located" receivers/transmitters in this way. Quite the opposite, rather than state that a "co-located" receiver/transmitter is "not associated with" **either** a receiver or transmitter of the self terminal (which is how the "companion" terms are defined), the specification simply provides that a "co-located" receiver/transmitter is "not associated with the self terminal," defined to include **both "**a receiver and transmitter." '775 patent, 6:7-12, 5:65-67. To the extent Defendants are advocating a construction for "co-located" so as to distinguish it from the definition of "companion" (which does state an association with either a receiver or transmitter of the self terminal), that is entirely unnecessary because none of the claims of the '775 patent are directed to a "companion" receiver or transmitter. Accordingly, the Court should not substitute "self terminal" with **either** a "receiver" or "transmitter," nor is it necessary to state the "co-located" receiver/transmitter's association (or lack thereof) with **either** a "receiver" or "transmitter" in the standalone "co-located" terms.

8. "convolving a composite transmitter signal set with a compression curve function" ('775 patent, claims 10, 18, 30, 38)

Defendants have not controverted the claims language and the explanations from the specification, combined with expert testimony in the Wells Decl. and at the deposition of Dr. Wells, with clear and convincing evidence to render "a compression curve function" ambiguous, not well-known, or indefinite. Resp. at 26-29. Defendants' attempt to impose an over-the-top requirement that to escape a finding of indefiniteness, Finesse must name each and every specific algorithm performing a "compression curve function" being applied is contrary to law. *Intellectual Ventures II LLC v. BITCO Gen. Ins. Corp*., 2016 WL 125594, at *13 (E.D. Tex. Jan. 11, 2016) ("merely because a term has a number of different meanings does not mean the term is merely a verbal construct"). In this case, the claims which involve "convolving" using a "compression curve function" are not directed to "a number of different meanings" and do not carry a meaning directed toward just any and all algorithm. To the contrary, the algorithm used must "convolve" and be "based on a power series description of the nonlinear process" which includes "generating n-th order ICs" by "digitally multiplying and filtering" given signals. *See* Wells Decl. ¶164; *see* '775 patent, claims 10, 18, 30, 38.

In *Apple Inc. v. Motorola, Inc*., the Court found that a skilled artisan would understand the term "heuristic" to mean "one or more rules to be applied to data to assist in drawing inferences from that data." 757 F.3d 1286, 1301 (Fed. Cir. 2014). If the term "heuristic," which is even broader than "convolving . . . using a compression curve function," is found not indefinite based on the knowledge of a person of ordinary skill in the art at the time, then "convolving . . . using a compression curve function," must pass muster as well. *Id.*; *Personalized Media Commnc'ns, LLC v. ITC*, 161 F.3d 696, 704 (Fed. Cir. 1998) ("detector … had a well-known meaning.").

For the foregoing reasons, the Court should adopt Finesse's proposed constructions.

Dated: June 20, 2022 Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that counsel of record are being served this 20th day of June, 2022 with a copy of this document via email.

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